Technical Bulletin

File-Aid

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File-Aid is now installed on all of the CPUs within ITS. The method for starting File-Aid is to get on to one of the IBM mainframes. From the main ISPF panel choose the local option (L), and then choose FILE. File-Aid panels look very similar to the standard ISPF panels.

Product Overview

File-Aid is an interactive software product that increases data processing productivity in both program development and daily file and record maintenance. File-Aid is designed for system, application, operations, and all other data processing personnel.

Like IBM's ISPF, File-Aid is a screen-driven product. It employs fill-in-the-blank processes that make it easy to use. Screen formats and other conventions are retained for familiarity. The entire product is backed by tutorials that provide detailed instructions and descriptions.

File-Aid browses, edits, allocates, compares, copies, deletes, and prints files of any standard MVS access method. For a partitioned data set (PDS), you can browse or edit records as logical information. Record processing and information retrieval are extremely fast, thus speeding up programmer activities.

File-Aid's powerful editor expands your editing capabilities to include the following features:

C   A character mode for browsing and editing DASD data sets with any record format and record lengths up to 32,760 bytes (32kB).
C   A formatted mode that allows you to browse and edit one record at a time, field-by-field, using your COBOL or PL/1 record layout field names to describe each field.
C   A vertical formatted mode that allows you to browse and edit records on a field-by-field bases using the record layout field names as column headers. Record layouts can be either COBOL, (FD; 01 Level) or PL/1 (Declare).
C   The Compare function that compares two data files field-by-field using the specified record layouts, and reports the differences between the files.

C   The reformat function for selectively reformatting old and new record layouts.

File Access Methods

File-Aid can process files created through any standard MVS access method. This eliminates the file type restrictions that exist in ISPF browse, edit, and copy functions. In addition, File-Aid accesses IAM files. File-Aid has special support for browsing and updating CA-Panvalet. Currently, the File-Aid VSAM utility (option 3.5) only allocates, deletes, and renames VSAM-LINEAR data sets.

Record Lengths and Formats

File-Aid allows record lengths of up to a maximum of 32,760 bytes (approximately 32kB). File-Aid processes any record format including fixed and variable length, spanned, and undefined records.

Boolean Operators

All Boolean operators are available in File-Aid, enhancing selection processing. This capability allows you to search for specified record conditions in the Browse, Edit, Print, Reformat, and Compare functions and in the Copy and Search/Update utilities. Only the specific records are processed or displayed, eliminating unwanted data display and processing. Multiple selection conditions can be connected with AND/OR elements. Record layouts can be used to specify conditions based on field contents.

PDS Member List Processing

When processing a PDS, File-Aid allows you to generate a selective list of members. File-Aid can scan a member list on a record and/or a member level for a specific field value or string. The displayed list contains only the members that match the specified condition. File-Aid can select members based on member name or mask, creation date, changed date, or user ID of last modification.

Selective Processing

With File-Aid, you can specify record selection by indicating a specific starting point in a file, a certain number of records to skip, a specific record key, a selection interval, or a relative byte address. You can also specify record selection by checking for specific record data in a named field or record position.

JCL Processing

You can process JCL records as logical statements or physical records. File-Aid recognizes the comma as a continuation. Logical processing is possible for DD, EXEC, JOB, JCLLIB, OUTPUT, PROC, SET, and XMIT statements. JCL updating is supported by the Search/Update utility.

Bidirectional Processing

File-Aid reads sequential and VSAM files either forward or backward. Records at the end of a file can be processed just as quickly as records at the beginning.

ISPF Convention Conformance

Like ISPF, File-Aid provides line-command processing for a displayed list of data sets or members. The number of line commands available depends on the function in use. Depending on the member list generated, the S (Select), X (Exclude), B (Browse), and E (Edit) line commands are accepted.

File-Aid allows you to change screens using an equal sign (=). To change screens, enter '=', followed by the File-Aid options value, and the desired File-Aid function and option code in any COMMAND or OPTION field on the current screen, and press Enter.

> **Example** : SELECT OPTION ===> =f.3.1

When you press Enter, File-Aid displays the File-Aid Library Utility screen (option 3.1).

Data set names are entered on the File-Aid screens in the same format as ISPF. Single quotes (') are used to distinguish between qualified and unqualified data set names. The name is unqualified when it is entered without quotes and qualified when entered within quotes. In File-Aid, the trailing quote is optional.

File-Aid has tutorials that provide detailed information on each function. The tutorials define all field values for each screen and any associated error codes. To access tutorial information, use the HELP command or press the PF key assigned to the HELP command. PF1 is the default.

Security Package Interface

File-Aid works with any currently installed security package. It uses standard open and close macros to avoid bypassing your security rules.

Unqualified Data Set Naming for VSAM Clusters

The File-Aid System Parameters screen (option 0.1) allows you to enter a default intermediate

name to use for constructing VSAM data set names. When an unqualified data set name is entered for a VSAM file, the fully-qualified name is created by concatenating the installation defined VSAM high-level name, your VSAM intermediate name, and the unqualified data set name. This process occurs during a search for a data set when File-Aid prefixes the unqualified data set name with the TSO prefix and fails to locate the data set.

Parameters

When File-Aid was installed, some processing parameters were preset. The values of these parameters are displayed and can be modified on various function screens. However, modifications made on the function screens are temporary.

The Parameters function gives you a menu of File-Aid processing parameters which you can display and modify. Since all changes are saved in your user profile, you can modify your default values without affecting other users.

Browse

The Character Browse Mode provides full-screen viewing of data and enables you to invoke either formatted browse or vertical formatted browse modes. The entire data set or a selected subset may be displayed by using selection criteria. The HEX command lets you toggle the display to show hexadecimal values for each character.

The Formatted Browse Mode provides viewing capability for data using a record layout or XREF to identify each data field in a record. This mode presents data one record at a time and formats each record field by field with the field names describing each field. Record layouts can be either COBOL (FD; 01 level) or PL/I (Declare).

The Vertical Formatted Browse Mode also provides full-screen viewing of data using a record layout. This mode presents multiple records at a time. The display is in a vertical format that uses the record layout to organize each record field under its record layout field name. Record layouts can be either COBOL (FD; 01 Level) or PL/I (Declare).

Edit

The Character Edit Mode expands the strength of ISPF's full-screen editing to include additional access methods and to accommodate increased record lengths. Most of the ISPF primary and line commands have the same function in File-Aid, providing familiarity and continuity. Also, the entire data set or a selected subset may be edited by using selection criteria.

The Formatted Edit Mode and the Vertical Formatted Edit Mode allow you to display and edit records using data fields as they are defined by COBOL or PL/I record layouts. Formatted Mode displays the data one record at a time. Vertical Formatted Mode supports the use of XREF's to

automate the use of multiple record layouts for data sets with varying record types and multiple segments.

Utilities

File-Aid utilities are similar to the ISPF utilities, but do not duplicate ISPF capabilities. The utilities either provide data set information, or support data set manipulation functions such as allocate, delete, and copy.

Library

The Library utility displays directory information for partitioned data sets (PDS's). Members of any library type can be deleted, renamed, or browsed. A special display format is used for load libraries to show CSECT information such as compile dates and offsets and allow you to modify the load module characteristics such as AMODE or RMODE APF authorization.

Data Set

The Data Set utility provides processing similar to the ISPF data set utility. In addition, File-Aid can allocate and display information for BDAM, GDG (Generation Data Groups), ISAM, and SMS managed data sets. A free-space option is provided, along with delete and rename processing for data sets of all MVS access methods.

Copy

The Copy utility provides selective and non-selective record and member copying to and from different access methods. Its capabilities greatly exceed those of the ISPF copy utility. File-Aid selection criteria controls the records (or members) being copied. Data sets of all MVS access methods are supported.

Copy can be processed online or submitted for batch processing. PDS processing options allow members to be copied, based on the member name and other PDS statistics.

Catalog

Lists of cataloged data sets are displayed with the Catalog utility. FIND, LOCATE, and P (Print) primary commands and B (Browse), E (Edit), R (Rename), U (Uncatalog), D (Delete), M (Modify), I (Information display), S (Information short), F (Free unused space), 1 (File-Aid browse), 2 (File-Aid edit), and 6 (File-Aid Search/Update) line commands can then be used on the catalog list. Control features allow the list to be selective, based on data set name, and limit the information displayed (Quick, Sort, Long).

VSAM

An interactive process for allocating VSAM and IAM data sets is provided in the VSAM utility. This utility can also allocate KSDS, ESDS, RRDS, or LINEAR clusters and IAM data sets. The VSAM utility can rename, redefine, modify, and delete clusters, alternate indexes, and paths. A formatted display of data set information and a build alternate index function is also available.

Batch processing is also available including the generation of IDCAMS DEFINE cluster statements. All functions can create IDCAMS control cards which can be saved or submitted for batch processing.

Search/Update

The Search/Update utility enables you to view and modify files of any standard MVS access method. It includes selective file scanning and global change preview capabilities. Selection criteria control the records that are displayed or updated. For PDS data sets, FIND and CHANGE commands make it easy to work with member lists. You may request an audit trail when updating.

VTOC

The VTOC utility lists data sets by name or in physical volume sequence. Single or multiple volumes can be processed and optionally printed online. File-Aid/Batch also supports the preparation of hardcopy VTOC lists. The File-Aid VTOC utility runs considerably faster than the ISPF VTOC utility, and provides more DASD management information.

Interactive

The Interactive utility processes File-Aid/Batch commands at a terminal. This utility can help verify the logic of a large batch job before it is submitted. It also provides additional processing that is not possible through the File-Aid screens.

Batch Submit

The Batch Submit utility provides a skeletal framework for you to submit any batch job for execution in the background. An entry screen is displayed for each type of JCL card. After you enter all required values, the job is created, and you can then submit, browse, or edit it.

Print

The print function prints:

- C Data file contents
- C Selection criteria created with File-Aid option 6
- C Record layout cross references (XREFs) created with File-Aid option 7
- C Formatted record layouts
- C Audit trail data sets that were created while editing a data file in File-Aid options 2 (Edit) and 3.6 (Search/Update utility).

Selection Criteria

You use the Selection Criteria function to create and maintain criteria to select only records with specific criteria for use with the Browse, Edit, Print, and Compare functions and the Copy and Search/Update utilities.

XREF

You use the XREF function to create and maintain record layout cross references for use when formatting files with multiple record types in the Browse, Compare, Edit, Print, Reformat, and Selection Criteria functions.

View

The View function displays the contents of COBOL or PL/I layouts as interpreted by File-Aid showing the beginning, ending, and length of each field.

Reformat

With the Reformat function, you can reformat some or all of the records of an input file and write them to an output file, based on record layouts defining the input and output files. All records can be copied while reformatting only specific records or record types. Reformat can be processed online or submitted for batch processing.

Compare

File-Aid's Compare function enables you to compare two files of any file organization supported by File-Aid (VSAM, SEQ, PDS, BDAM, ISAM, and IAM) and report the differences between the files. Reports can be formatted field by field showing before and after values. You can use selection criteria to indicate specific records in each file to compare, and compare criteria to specify fields to include or exclude during the comparison process. File-Aid also gives you a choice of formats (character, formatted, or hexadecimal) in which to report the file differences.

File-Aid/Batch

General Features

File-Aid/Batch has the following general features:

- C   Processes files of all access methods
- C   Eliminates record length restrictions
- C   Processes all record formats
- C   Executes all Boolean operators
- C   Offers multiple record/member selection criteria
- C   Handles JCL format
- C   Offers bidirectional processing
- C   Maintains record key/RBA setting
- C   Observes all security systems

All Access Methods—Files created through any standard MVS access method can be processed using File-Aid. Currently, the File-Aid VSAM utility (option 3.5) only allocates, deletes, and renames VSAM-LINEAR data sets.

No Record Length Restrictions—File-Aid processes record lengths up to 32,767 bytes (32K). For records that extend beyond 32K, specify LRECL=X and File-Aid/Batch provides limited support (COPY, DUMP, and LIST) for a record length up to 64K.

All Record Formats—File-Aid processes all record types including fixed or variable length, spanned, and unformatted formats.

All Boolean Operators—Use any Boolean operator to enhance your selection processing. Specify your record conditions and only those records to process and display, eliminating unwanted data. Use the AND/OR operator to connect multiple selection conditions.

Multiple Selection Criteria—Perform selection processing on either a record or a member level. File-Aid can scan a PDS for a specific condition and select records based on that condition.

JCL Format—File-Aid processes JCL statements as logical statements. File-Aid recognizes the comma as a continuation in JCL, and treats the physical records that contain the continued data as one logical JCL record.

Bidirectional Processing—File-Aid reads sequential and VSAM files either forward or backward. This capability lets you quickly retrieve and analyze data.

Record Key/RBA—You can indicate a specific starting point in a file, by specifying a record KEY, or by indicating a relative byte/block address (RBA) value.

Security—File-Aid is compatible with commercially available security packages (RACF, ACF2,

TOP SECRET). It uses standard open and close macros to avoid bypassing security rules. File-Aid security can also limit destructive access to files.